

REMARKS

The Office Action dated March 13, 2007 has been reviewed, and the comments of the U.S. Patent Office have been considered. Claims 1-16 are pending in this application. By this Amendment, claim 11 has been amended.

Claims 11-12 and 15 stand rejected under 35 U.S.C. §102(b) over Sargent (U.S. Pat. No. 6,424,891); and claims 1-10, 13-14, and 16 stand rejected under 35 U.S.C. §103(a) over Sargent in view of Deguchi (U.S. Pat. No. 6,278,915). The rejections are respectfully traversed.

With regard to independent claims 1 and 11, Sargent fails to show or describe a portable range extender comprising an internal combustion engine and a dynamoelectric machine mechanically coupled to the internal combustion engine by a shaft and electrically coupled to a direct current source. The Office Action at page 2 asserts that the recited internal combustion engine corresponds to Sargent's prime mover 110 (which Sargent describes to be a gas turbine engine; *see* Sargent at col. 5, lines 25-26) and that the recited dynamoelectric machine corresponds to Sargent's AC generator 160. However, even with the Office's interpretation, Sargent does not show or describe a direct current source, or show or describe AC generator 160 to be electrically coupled to a direct current source.

The Office Action at page 2 asserts that Sargent's AC generator 160 is inherently coupled to a direct current source because a "battery [would be] inherently necessary to start the operation of the Gas Turbine Engine" (emphasis added). Applicants respectfully traverse the Office's position because the rejection does not consider claim 11 as presented. Claim 11 recites that the dynamoelectric machine is electrically coupled to a direct current source, but the Office reads claim 11 as if the recited "dynamoelectric machine" has been replaced with the term "internal combustion engine". The Office has thus failed to establish that the Sargent device has a direct current source electrically coupled to a dynamoelectric machine, inherently or otherwise.

Furthermore, the Office has not establish that a direct current source is inherently coupled to Sargent's AC generator 160 (or even to Sargent's prime mover 110). MPEP §2112(IV) states that:

To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a

certain thing may result from a given set of circumstances is not sufficient.

The Office has not established that a direct current source is necessarily present in the Sargent design with regard to AC generator 160 (or prime mover 110).

Also with regard to independent claims 1 and 11, Sargent fails to show or describe a portable range extender comprising an internal combustion engine and a dynamoelectric machine mechanically coupled to the internal combustion engine by a shaft and electrically coupled to a direct current source wherein said dynamoelectric machine is sufficiently sized so that it can drive the shaft to start the internal combustion, and, in response to a user input to the controller, a sequence of range extender operations is initiated including a first phase in which electrical energization is applied from the direct current source to the dynamoelectric machine for operation thereof as a motor to drive the shaft to start the engine in rotation, a second phase in which the engine is activated for operation as a prime mover, and a third phase in which the dynamoelectric machine is activated in generator operation for providing electrical current to the vehicle. Sargent does not show or describe that AC generator 160 is sized to start internal combustion in prime mover 110, or a three-phase sequence of operations involving the use of a direct current source to cause AC generator 160 to drive a shaft and start the prime mover 110 in rotation. The Office Action at page 3 refers to Sargent's Abstract in this regard, but the Abstract does not describe the starting of prime mover 110. At most, Sargent's Abstract regards the supplying of a bleed air in regard to an "engine-start capability"; however, as shown in Sargent at Fig. 3, the bleed air is made available to a different engine external to and mechanically separate from the Sargent device. The Office thus fails to establish that the Sargent device provides the claimed invention as a whole as recited in claim 11.

With further regard to independent claim 1, the Office relies on its interpretation of Sargent with regard to claim 11 in the rejection of claim 1. For at least the reasons stated above for claim 11, Sargent fails to show or describe the claimed method because Sargent does not show or describe "an internal combustion engine ... electrically coupled to an electric power source" or "a dynamoelectric machine ... sufficiently sized so that it can drive the shaft to start the internal combustion [and the step of] ... applying electrical energization from a power source to the dynamoelectric machine for operation thereof as a motor to drive the shaft to start the engine in rotation in response to an initiation input", as recited in claim 1. The secondary

reference, Deguchi, fails to remedy the deficiencies of Sargent, and the Office does not assert that Deguchi remedies the above-described deficiencies.

Again, with reference to claim 1, the Office fails to establish a *prima facie* case of obviousness because the Office has not provided an explicit analysis identifying a reason that would have prompted a person of ordinary skill in the relevant field to combine Sargent with Deguchi. Sargent regards a power unit for use with aircraft, whereas Deguchi regards a control system for an automotive vehicle. The Office Action at pages 4-5 asserts that one of ordinary skill would have modified Sargent's power unit with Deguchi's "speed and engine temperature sensors ... for the purpose of calculating a target engine speed needed to realize the vehicle speed, the target driving torque and the target generated electric energy at the lowest fuel consumption" (emphasis added). As Sargent is not directed at obtaining or achieving a vehicle speed, the Office fails to establish why one of ordinary skill would modify the Sargent power unit to obtain a vehicle speed.

For the foregoing reasons, Sargent fails to show or describe all of the features recited in independent claims 1 or 11, or the dependent claims thereof. Furthermore, for independent claim 1 and the dependent claims thereof, the Office fails to establish a *prima facie* case of obviousness because Deguchi fails to teach or suggest the features missing from Sargent, and the Office has failed to provide an explicit analysis identifying a reason that would have prompted a person of ordinary skill in the relevant field to modify Sargent's power unit with the teachings of Deguchi. It is respectfully requested that the rejections be withdrawn.

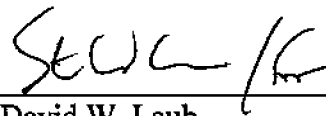
CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this Application and the prompt allowance of at least the pending claims.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the undersigned to expedite prosecution of the application.

The Commissioner is hereby authorized by this paper to charge any fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-3840. **This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).**

Respectfully submitted,



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